

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-85. (Cancelled)

86. (Currently Amended) A continuous carbon fiber comprising single-wall carbon nanotubes in substantially parallel orientation, wherein a substantial portion of the single-wall carbon nanotubes have a homogeneous characteristic selected from the group consisting of lengths, diameters, helicities and combinations thereof and of claim 84 having a composite structure comprising:

- a) a first plurality of single-wall carbon nanotubes in a first region having a first homogeneous characteristic, wherein the first homogeneous characteristic is selected from the group consisting of lengths, diameters, helicities and combinations thereof;
- b) a second plurality of single-wall carbon nanotubes in a second region having a second homogeneous characteristic, wherein the second homogeneous characteristic is selected from the group consisting of lengths, diameters, helicities and combinations thereof; and
- c) wherein the first homogeneous characteristic is different from the second homogeneous characteristic.

87. (Previously Presented) A composite fiber comprising a plurality of continuous carbon fibers, wherein each of the continuous carbon fibers comprise single-wall carbon nanotubes in substantially parallel orientation.

88. (Previously Presented) The composite fiber of claim 87 wherein the composite fiber is a cable-like structure.

89. (Currently Amended) ~~The~~ A composite fiber of claim 87 further comprising a plurality of continuous carbon fibers, wherein each of the continuous carbon fibers comprise

single-wall carbon nanotubes in substantially parallel orientation, wherein the composite fiber further comprises:

- a) a central core comprising metallic single-wall carbon nanotubes; and
  - b) non-metallic single-wall carbon nanotubes, wherein the non-metallic single-wall carbon nanotubes surround the central core.
90. (Previously Presented) The composite fiber of claim 87 wherein at least some of the single-wall carbon nanotubes in at least a portion of the composite fiber are not parallel.
- 91-93. (Cancelled)
- 94 (New) The fiber of claim 86 wherein the first region and the second region are in different segments along the axis of the fiber.
95. (New) The fiber of claim 86 wherein the first region and the second region are simultaneously present in a cross-section of the fiber.